

### **In the Claims**

1. (Previously presented) A computerized method comprising:  
producing a set of finite mixture models (FMM)s from a set of parameter values and training data using an Expectation Maximization (EM) process;  
calculating a minimum description length (MDL) value for each of the set of FMMs;  
selecting a FMM from the set of FMMs based on the corresponding MDL values;  
and  
generating a quantized stream of data by applying the FMM to a data stream if the FMM selected from the set of FMMs defines a vector quantized codebook.
2. (Original) The method of claim 1, wherein each parameter value is a model-complexity parameter for the EM process.
3. (Original) The method of claim 1, wherein selecting comprises selecting the FMM from the set of FMMs corresponding to the MDL having a smallest MDL value.
- 4-5. (Cancelled)
6. (Previously presented) The method of claim 1, further comprising applying the FMM selected from the set of FMMs to cluster a stream of data.
7. (Previously presented) The method of claim 6, wherein the FMM selected from the set of FMMs defines a cluster pattern.
8. (Currently amended) A machine-readable storage medium having executable instructions, which when executed, cause a device to perform functions comprising:  
producing a set of finite mixture models (FMM)s from a set of parameter values and training data using an Expectation Maximization (EM) process;  
calculating a minimum description length (MDL) value for each of the set of FMMs;

selecting a FMM from the set of FMMs based on the corresponding MDL values;  
and

generating a quantized stream of data by applying the FMM to a data stream if the FMM selected from the set of FMMs defines a vector quantized codebook.

9. (Currently amended) The machine-readable storage medium of claim 8, wherein each parameter value is a model-complexity parameter for the EM process.

10. (Currently amended) The machine-readable storage medium of claim 8, wherein selecting comprises selecting the FMM from the set of FMMs corresponding the MDL having a smallest MDL value.

11-12. (Cancelled)

13. (Currently amended) The machine-readable storage medium of claim 8, wherein the functions further comprise applying the FMM from the set of FMMs to cluster a stream of data.

14. (Currently amended) The machine-readable storage medium of claim 13, wherein the FMM selected from the set of FMMs defines a cluster pattern.

15. (Previously presented) A system comprising:  
a processor coupled to a memory through a bus; and  
a model selection process executed by the processor from the memory to cause the processor to produce a set of finite mixture models (FMM)s from a set of parameter values and training data using an Expectation Maximization (EM) process, to calculate a minimum description length (MDL) value for each of the set of FMMs, to select a FMM from the set of FMMs based on the corresponding MDL values, and to generate a quantized stream of data by applying the FMM to a data stream if the FMM selected from the set of FMMs defines a vector quantized codebook.

16. (Original) The system of claim 15, wherein each parameter value is a model-complexity parameter for the EM process.
17. (Original) The system of claim 15, wherein the model selection process further causes the processor, when selecting, to select the FMM from the set of FMMs corresponding to the MDL having a smallest value.
- 18-19. (Cancelled)
20. (Previously presented) The system of claim 15, wherein the model selection process further causes the processor to apply the FMM selected from the set of FMMs to cluster a stream of data.
21. (Previously presented) The system of claim 20, wherein the FMM selected from the set of FMMs defines a cluster pattern.
22. (Previously presented) An apparatus comprising:  
    means for producing a set of finite mixture models (FMM)s from a set of parameter values and training data using an Expectation Maximization (EM) process;  
    means for calculating a minimum description length (MDL) value for each of the set of FMMs;  
    means for selecting a FMM from the set of FMMs based on the corresponding MDL values; and  
    means for generating a quantized stream of data by applying the FMM to a data stream if the FMM selected from the set of FMMs defines a vector quantized codebook.
23. (Original) The apparatus of claim 22, wherein each parameter value is a model-complexity parameter for the EM process.

24. (Original) The apparatus of claim 22, wherein the means for selecting comprises means for selecting the FMM from the set of FMMs corresponding to the MDL having a smallest MDL value.

25-26. (Cancelled)

27. (Previously presented) The apparatus of claim 22, further comprising a means for applying the FMM selected from the set of FMMs to cluster a stream of data.

28. (Previously presented) The apparatus of claim 27, wherein the FMM selected from the set of FMMs defines a cluster pattern.